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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,012

10/11/2005

Hong Cong Tuyen Pham

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EXAMINER

PRITCHARD, JASMINE L

ART UNIT

PAPER NUMBER

2615

MAIL DATE

DELIVERY MODE

08/20/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,012	Applicant(s) PHAM ET AL.	
	Examiner JASMINE PRITCHARD	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/11/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/11/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/27/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: See page 8, line 1 and notice "... and X is the shortest wavelength of the signal." The reference character "X" is not in the preceding formula.

Appropriate correction is required.

2. The disclosure is objected to because of the following informalities: See [0054], the sectional views along the lines "A7V" and "ee" are not shown in figures 4 and 5 as stated.

Appropriate correction is required.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "5" and "6" have both been used to designate "listener's ears". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

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informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "4" and "42, 43" have both been used to designate "cambered bands".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "6" has been used to designate both "listener's ear" and "potential listener".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “3” has been used to designate both “bracket” and “ring”. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “4” has been used to designate both “bracket” and “cambered bands”. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “42” has been used to designate both “cambered bands” and “horizontal

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band” and “supporting band”. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

9. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “43” has been used to designate both “cambered bands” and “vertical band” and “supporting band”. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1, 5 and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. See above the first objection to the Specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 1 recites the limitation "the shortest wavelength corresponding to a given maximum frequency" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Examiner has interpreted the claim accordingly.

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12. Regarding Claim 5: The terms in bold "the headphones are **closed**, said bracket **comprising a shell** defining a **cap-shaped surface** receiving said loudspeakers" in claim 5 is a relative term which renders the claim indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In which way are the headphones **closed** and how does that include the bracket comprising a shell and how does that define a **cap-shaped surface** receiving said loudspeakers.

Examiner has interpreted the claim accordingly.

13. Claim 6 recites the limitation "... being confused with" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Examiner has interpreted the claim accordingly.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meucci, Jr. (U.S. Patent 6,038,330).

Regarding Claim 1:

Meucci, Jr. (hereafter Meucci) teaches a headset (10 – *headset*) for spatial restitution of a sound (Abstract) comprising: two headphones (16 – *left headphone* **and** 18 – *right headphone*), each headphone comprising: a bracket (24 – *headphone support frames*) defining at least partially a cap-shaped surface and globally an ear of a listener (12 – *ear of listener*); and at least five loudspeakers (32A-32M – *sound focusing assemblies*, **also note** Column 6, lines 39-42, “*Each sound focusing assembly 32 includes an electroacoustic transducer 40...*”) arranged on the hemispheric surface (See Column 8, lines 57-61). Meucci does not explicitly teach or restrict two adjoining loudspeakers are spaced apart by a distance smaller than half the shortest wavelength corresponding to a given maximum frequency in order to reconstruct an acoustic field perceived as continuous by the human ear, for acoustic frequencies smaller than said given maximum frequency, said maximum frequency being a frequency audible to the average human ear for the purpose of having equal sound pressure to the listener’s ear from the speakers. It is a matter of design as to what position the speakers are arranged in the headphone for the purpose of focusing sound and directing the sound toward the pinna of each ear of the listener.

Regarding Claim 2:

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Meucci teaches a headset (10 – *headset*) comprising: at least six loudspeakers per headphone (See Column 8, lines 61-63 **and** notice “*In a preferred embodiment, each of the headphones 16 and 18 includes thirteen of the sound focusing assemblies 32.*”).

Regarding Claim 3:

Meucci teaches a headset (10 – *headset*). Meucci does not explicitly teach or restrict said maximum frequency is 5 kHz and wherein two adjoining loudspeakers are spaced apart by a distance equal to or less than 3cm for the purpose of having equal sound pressure to the listener’s ear from the speakers. It is a matter of design as to how to how far the loudspeakers are spaced apart for the purpose of focusing sound and directing the sound toward the pinna of each ear of the listener.

Regarding Claim 4:

Meucci teaches a headset (10 – *headset*), wherein said headphones (16 – *left headphone* **and** 18 – *right headphone*) are open (36 - *opening* **and** See *Abstract* **and** notice “Each of the headphones includes a hollow casing forming an interior chamber having an opening”), said bracket (24 - *headphone support frames*) being comprised of an armature (30 – *hollow casing*) capable of receiving said loudspeakers (32A-32M – *sound focusing assemblies*).

Regarding Claim 5:

Meucci teaches a headset (10 – *headset*), wherein the headphones (16 – *left headphone* **and** 18 – *right headphone*) are closed, said bracket (24 - *headphone support frames*) comprising

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a shell (20 – *headband*) defining a cap-shaped surface (30 – *hollow casing*) receiving said loudspeakers (32A-32M – *sound focusing assemblies*).

Regarding Claim 6:

Meucci teaches does not explicitly teach or restrict a sound recording device intended for later spatial restitution, comprising: a headset (10 – *headset*), wherein the loudspeakers are replaced with multidirectional or cardioid microphones, the recording cap-shaped surface corresponding to said recording device being confused with said cap-shaped surface (for acoustic transmission) of one said headset for the purpose of modifying and substituting changes without departing from the scope of the true invention. It is well known to those of ordinary skill in the art to be able to replace loudspeakers with multidirectional or cardioid microphones for the purpose of modifying and substituting changes without departing from the scope of the true invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASMINE PRITCHARD whose telephone number is (571)270-3712. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Suhan Ni can be reached on 571-272-7505. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. P./

Examiner, Art Unit 2615

/Suhan Ni/

Primary Examiner, Art Unit 2614